As you may know, there are many technologies that are available to use renewable energy technology with a water purification system to solve the problem in Yuendumu. One of them is the use of Photovoltaic (PV).

The main idea is to harness solar energy to power the entire system, as well as the theory to convert thermal energy into electricity through the photovoltaic effect.

Technology/devives:

* PV Panels: The most important part of the system, capturing sunlight and converting it into electricity through the photovoltaic effect.
* Regulator/ charge controller is used to regulate and control the flow of electricity from the PV panels to ensure efficient power management.
* Surface Water: from a river, lake, or dam
* Pump: pump is made with friendly-to-fresh-water materials.
* Water Storage System: tank/reservoir, with friendly-to-fresh-water materials.
* Monitoring and control system: This software system is responsible for monitoring and controlling the operation of the water pump and filtration system. The control system may be an application of IoT or AI system.

Three different approaches in different stages

Benefits:

* Access to Clean and Safe Water
* Sustainable and Renewable Energy Source
* Cost-Effective Operation
* Independence from Grid Infrastructure

Impacts:

* Health and Well-being
* Increase living standards, number of jobs, incomes and technical skills for indigenous people

Constraints:

* Initial Investment
* Technical Expertise
* Maintenance and Repairs